IN THE CLAIMS:

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

1. (Currently amended) A probe for detecting near-field light or irradiating near-field light, comprising:

a cantilever having first and second ends, and being supported at ~~an~~ said first end ~~thereof~~ by a substrate and having said second end free;

a hollow tip formed at [[a]] said free end of said cantilever, said tip having an end;

a microaperture for utilizing near field light formed at ~~the~~ said end of said tip; and

a groove formed inside said cantilever, said groove comprising a hollow waveguide and a mirror[[;]],

wherein ~~the direction of the end of said tip is substantially perpendicular to the longitudinal direction of said cantilever, and~~ said mirror ~~is an end face of the groove and~~ reflects the light entering from the microaperture toward the hollow waveguide or reflects the light transmitted in said hollow waveguide toward said microaperture.

2. (Original) The probe according to Claim 1, wherein said waveguide has a V-shaped transversal cross section.

3. (Original) The probe according to Claim 1, wherein said waveguide

has a trapezoidal transversal cross section.

4. (Original) The probe according to Claim 1, wherein said waveguide has a U-shaped transversal cross section.

5. (Original) The probe according to Claim 1, wherein said tip is shaped as a square cone.

6. (Canceled)

7. (Original) The probe according to Claim 1, wherein said cantilever is principally composed of silicon.

8. (Canceled)

9. (Original) The probe according to Claim 1, wherein said mirror is a concave mirror.

10. (Currently amended) A method for producing a probe for utilizing near field light, ~~light detection or light irradiation~~, ~~which comprises~~ said method comprising the steps of:

working a first substrate to form a groove and a mirror ~~at an end of~~ in the groove ~~therein;~~

~~said mirror being a slanted or a concave end face of the groove;~~

forming a flat ~~plate-shaped~~ cover portion on the groove to form a

hollow waveguide having an opening in a part thereof[[,]];

~~forming a hollow tip having a microaperture on the opening, and~~

~~removing a part of the substrate by etching, to form a cantilever~~

preparing a second substrate having a recess portion;

forming a layer to become a tip layer in the recess portion;

aligning the first substrate having the flat cover portion and the second substrate such that the flat cover portion and the layer are in contact with each other;

detaching the second substrate from the first substrate to form a hollow tip having a microaperture on the opening; and

removing a part of the first substrate by etching, to form a cantilever.

11. (Currently Amended) The method according to Claim 10, wherein ~~said~~ the groove and ~~said~~ the mirror are formed by etching ~~said~~ the substrate.

12. (Currently Amended) The method according to Claim 11, wherein ~~said~~ the groove and ~~said~~ the mirror are formed by crystal-anisotropic etching of ~~said~~ the substrate.

13. (Currently Amended) The method according to Claim 10, further comprising a surface treatment step, of forming ~~said~~ the groove or ~~said~~ the cover portion into a mirror surface state.

14. (Currently Amended) The method according to Claim 10, wherein ~~said~~ the cover portion is formed from an SOI (silicon on insulator) layer of an SOI

substrate.

15. (Currently Amended) The method according to Claim 10, wherein ~~said~~ the cover portion is formed by filling ~~said~~ the groove with a resin layer and forming a metal film on ~~said~~ the resin layer.

16. (Currently Amended) The method according to Claim 10, wherein said step of forming ~~said~~ the hollow tip having ~~said~~ the microaperture on ~~said~~ the opening comprises the steps of:

forming a film of a tip material on a recess formed on a substrate,

transferring the tip material onto the opening, and

etching the end of a hollow tip resulting from ~~the~~ said transferring step to form the microaperture.

17. (Currently amended) A surface observation apparatus utilizing near field light provided with at least one probe selected from the group consisting of probes according to any one of Claims 1 to 5, 7 and 9.

18. (Currently amended) An exposure apparatus utilizing near field light provided with at least one probe selected from the group consisting of probes according to any one of Claims 1 to 5, 7 and 9.

19. (Currently amended) An information processing apparatus utilizing near field light provided with at least one probe selected from the group consisting of probes according to any one of Claims 1 to 5, 7 and 9.

20. (Previously presented) A surface observation apparatus provided with at least one probe selected from the group consisting of probes produced by a method according to any one of Claims 10 to 16.

21. (Previously presented) An exposure apparatus provided with at least one probe selected from the group consisting of probes produced by a method according to any one of Claims 10 to 16.

22. (Previously presented) An information processing apparatus provided with at least one probe selected from the group consisting of probes produced by a method according to any one of Claims 10 to 16.

23. (Previously presented) A probe according to Claim 1, wherein said mirror is a slanted face.

24. (Previously presented) The probe according to Claim 1, wherein a light toward the microaperture reflected by the mirror generates near field light in the vicinity of the microaperture.

25. (Previously presented) The probe according to Claim 1, wherein a light toward the hollow waveguide reflected by the mirror is a propagating light passing through the microaperture.